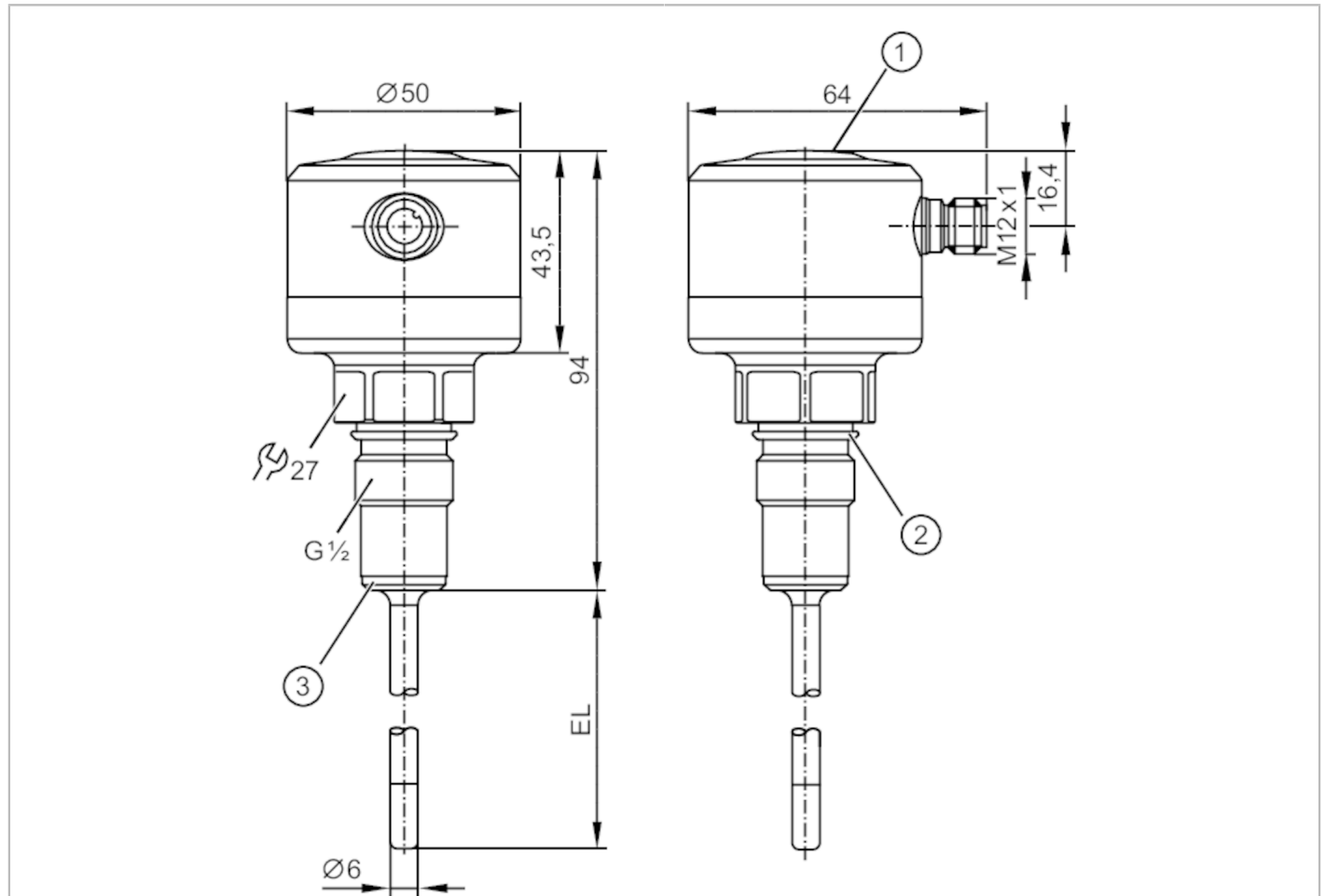


TCC541



Temperature transmitter

TCC150K1ER12-A-DKG/US



- 1 LED
- 2 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 3 pre-mounted PEEK sealing ring (removable) / metallic sealing area



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Measuring range	-25...160 °C -13...320 °F
Communication interface	IO-Link
Process connection	threaded connection G 1/2 external thread sealing cone
Installation length EL [mm]	150
Application	
System	gold-plated contacts
Measuring element	1 x Pt 1000
Reference element	1 x NTC
Media	liquids and gases
Pressure rating	160 bar 16 MPa
Minimum installation depth [mm]	15
Electrical data	
Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)
Current consumption [mA]	10; (24 V)

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Temperature transmitter

TCC150K1ER12-A-DKG/US

Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	6
Integrated watchdog	yes
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	150
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output [% of the span / 10 K]	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)
Temperature coefficient IO-Link [% of the span / 10 K]	$< \pm 0,01$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4

TCC541



Temperature transmitter

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Software / programming		
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation default	DeviceID 1129
Operating conditions		
Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884
Mechanical data		
Weight [g]	463	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 244	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK	
Tightening torque [Nm]	30...50	
Process connection	threaded connection G 1/2 external thread sealing cone	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm	
Probe diameter [mm]	6	
Installation length EL [mm]	150	

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Temperature transmitter

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Remarks

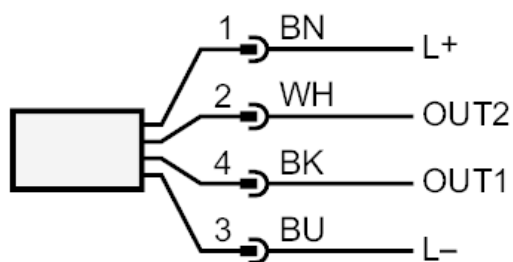
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



OUT2: analog output
OUT1: Diagnostic output / IO-Link